COUNCIL ON PHARMACY AND CHEMISTRY.

Capsules Glycerphosphates Comp. (H. K. Mulford Co.) will be added to the list of new and non-official remedies approved by the Council on Pharmacy and Chemistry, which will be published in the Journal July 4.

Isoform Powder (Koechl & Co.) having been withdrawn from the market, has been omitted from the list of articles accepted for new and non-official remedies, at the request of the American agents.

Investigations made under the direction of the Council having demonstrated that the claims made for Isopral (Farbenfabriken of Elberfeld Co.) are not justified by the facts, the Council has voted to omit this article from the list.

ALAMEDA COUNTY.

The meeting was called to order at 8:30 o'clock; Dr. E. M. Keys in the chair.

The program of the evening was conducted by Dr. Jas. Hogan of Vallejo and his assistant, Mr. West, giving a complete example of preparing and standardizing the various vaccines; showing many details of laboratory technic; greatly simplifying the work as well as the paraphernalia.

An ingenious device for regulating the heat of an incubator with an electric light was shown, as well as the method of making pipettes and capsules for the emulsions and solutions. The technic of the entire process was fully covered. In conjunction with the above demonstration, Dr. Hogan read the following paper:

Personal Experience with Bacterial Vaccines.

At the June meeting of the Northern California District Medical Society, held in Napa last year, I read a paper on the "Opsonic Index," and gave a practical demonstration of Wright's technic.

At that time I was completely "opsonized" and hoped that by the time a year had passed I would be able to show tables of indices taken in all the cases I have had under treatment; but I am sorry to say that I have not been able to obtain satisfactory indices in any case and have been compelled to carry on the work from a clinical standpoint, getting marvelous results in some cases and failures in others.

This was very discouraging at first, but as the majority who are working in this field report the same trouble I felt that the failure is not all my fault.

Some expert bacteriologists claim that it is not possible to get a satisfactory index at all, others claim to do so in every case, and while my experience would put me in the same class with the former, I wish that I had the ability of the latter, as I believe that there is no better way to regulate your dose and space the intervals than by the aid of the opsonic index.

I would have been tempted to throw up the work in the start if it had not been for the fact that my first case was one of colon bacillus infection of the kidney of an acute type in an old lady who had been treated with all the urinary antiseptics, etc.

I found a pure culture of colon b.; made a vaccine; tried for several days to get satisfactory indices, and in desperation gave an initial dose of fifty million. The result in this case was a clearing up of all the symptoms in a short space of time.

The literature on this subject has assumed such enormous proportions that at the present time it would take one's whole time to follow it. And so, instead of giving extracts from the literature, I will simply give you a statement of facts from the knowledge that I have acquired in ten months' work, fortified by the results of others.

I will refrain from touching on any of the theories of opsonic work, as splendid articles have appeared in the journals from time to time by such prominent workers as Wright, Ross, Allen, Hekton, Hollister and others.

It is the consensus of opinion that the best results are obtained from a vaccine made by isolating the organism from the patient's own lesion. There are some conditions that may mitigate against this, notably:

1. Where the isolation of the organism is difficult and tedious, as in tuberculosis.
2. Where the infection may be so acute that the loss of time consumed in making a vaccine would put the patient beyond help.
3. Where the infection is so chronic that the virulence of the organism has been greatly reduced. An example of this is in chronic gonorrhea.
4. Where you are dealing with organisms of definite type—as bacillus septus, and the pneumococcus.

If any of these conditions exist the use of a stock vaccine will have to be resorted to. I have had no experience with the use of stock vaccines, excepting in tuberculosis. Here we use the method of Wright, using Koch's T. R., diluting it until 1 c.c. equals 1-500 mg. of dried tubercle bacilli, and using from 1-2000 to 1-1000 mg. at a dose. I have no doubt that better results will be obtained in the use of a personal vaccine even in these cases.

Preparation of vaccine.—It is best, first, to determine whether you are dealing with a pure or a mixed infection. In case it be a mixed infection you will have to plate out the culture and isolate your organism in that way. Finding that you have a pure culture, select the medium that it best grows upon and transfer it to a broad surface, so that you will have a good growth. Taking a twelve to twenty-four hour growth, you are ready to start your vaccine. Add enough 1-10 per cent saline solution to cover your field of growth and by rubbing with a platinum loop emulsify the growth.

Pour the emulsion into a centrifuge tube and add enough saline solution to measure 5 c.c. Whirl for about three minutes, when all the large clumps will have been sedimented.

The centrifugated emulsion is now carefully poured into a test tube, taking care not to disturb the sediment; in the test tube also place about fifty small glass beads, draw out upper end of test tube in a Bunsen flame and seal. A thorough shaking will cause the beads to break up any small clumps not thrown down by the centrifuge. The emulsion, now called the concentrated vaccine, is placed in a steam sterilizer and a temperature of 60° C. maintained for one hour. This is sufficient to arrest all growth in the tube. The next step is to standardize the vaccine. This is done by taking equal volume with blood in a "capillary pipette." A mark about 5/8 inch from end of pipette is made, representing the unit of volume.

First draw up into the pipette four or five volumes of 2 per cent sodium citrate solution, then a small volume of air, next a volume of fresh blood, another volume of air, and finally a volume of emulsion. Mix by alternately drawing in and expelling the mixture on a clean glass slide. Divide into three parts and make smears upon clean slides. Dry smears in air and stain with any good blood stain, such as Leischman's. We are now ready to count. This is accomplished under a 1-12 inch oil immersion lens. Count the number of red blood cells and bacteria in each field, or until 500 red cells have been counted. Allowing five million red blood cells to the cubic millimetre, the product of five million and the number of bacteria counted, divided by 500, or the number of red blood cells counted, will equal the number of bacteria in one cubic millimetre of the vaccine. This, multiplied by 1000, will equal the number in one cubic centimetre. Having found out the number of organisms per c. c. of the concentrated vaccine, dilutions are now made to any de-